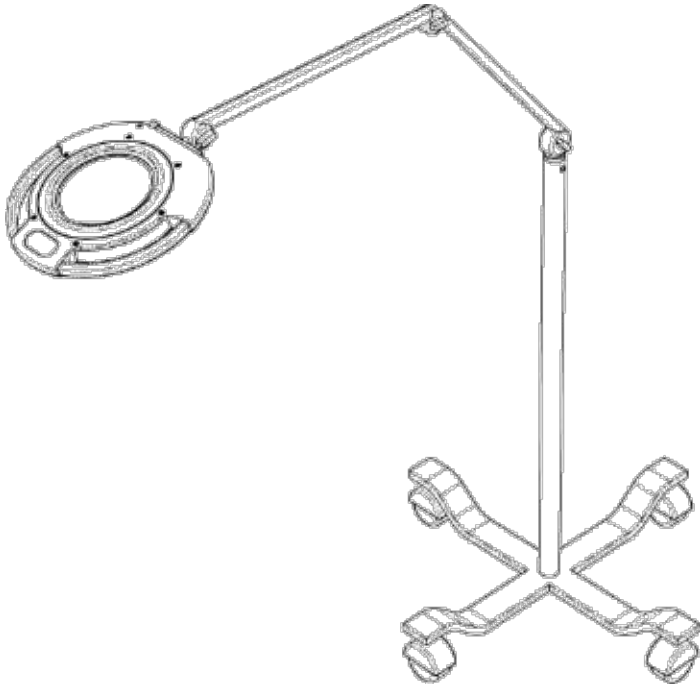


# Owner's Manual

Revision 1



**Syris**<sup>™</sup>  
Scientific

**in·vū**

Light so unique it  
must be experienced.

## Contact Information

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### **Manufacturer:**

Syris Scientific, LLC.

22 Shaker Rd., Gray, Maine, USA 04039

Phone: 207.657.7050

Fax: 207.657.7051

Email: [techsupport@syrisscientific.com](mailto:techsupport@syrisscientific.com)

Web: [www.syrisscientific.com](http://www.syrisscientific.com)

Service Center Hours: Monday – Friday

8:00AM – 5:00PM US Eastern Time

### **Authorized European Representative:**

CEPartner4U

Nijverheidsstraat 5

The Netherlands

Phone: 31.15.257.6682

Fax: 31.15.257.6683

Contact: Theo Nusselder

## Introduction

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Thank you for purchasing the Syris Scientific in·vu Vantage. This new visualization system combines magnification, illumination with state of the art LED technology, and patented adjustable polarization found on other Syris Scientific products. The in·vu Vantage will be a valuable tool for examinations and procedures. You will enjoy many years of benefits from your in·vu Vantage by following the care and use instructions provided in this manual. Please call our service group at 800.714.1374 or 207.657.7050 if we can be of any assistance in the use of your new system.

Syris Scientific, LLC

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## Legend

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The following symbols can be found on components of the in·vu Vantage.

Symbol	Title	Definition
	Attention!	Consult accompanying documents
	Dangerous Voltage!	Warning, dangerous voltage present
	Type B Applied Part	Complies with EN 60601-1 to provide protection against electric shock
	UL Mark	Certified by Underwriters Laboratories in the United States and Canada
	Nemko Certified	Certified according to the national standards of Norway, (EU/EEA equivalent in principles)
	CE Conformity Mark	Product conforms to the requirements of applicable EU directives

## **Safety Warnings and Hazards!**

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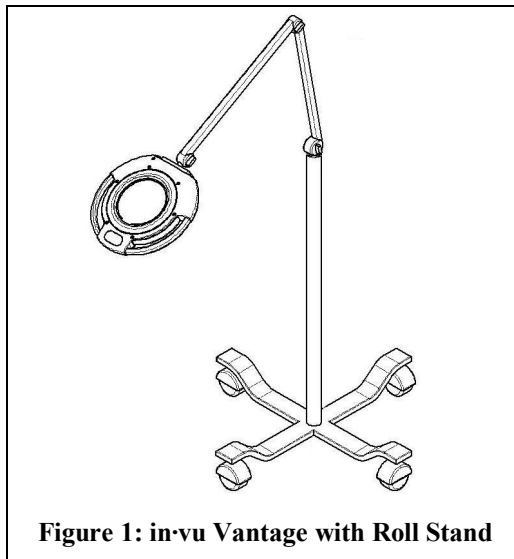
- Only individuals familiar with the operation and safe use of this instrument should operate it.
- Keep the unit out of the reach of children.
- Do not direct light from the unit at the eyes of any person for prolonged periods of time.
- Use only an approved, grounded electrical outlet.
- Do not immerse any component of the unit in water or other liquids.
- Do not operate the unit in a flammable or explosive atmosphere.
- Do not operate the unit in dusty environments.
- Do not overextend cables & cords to prevent stress and premature wear.
- Do not walk on or wheel objects over cables & cords.
- Do not clean the unit with abrasives or solvents.
- Do not insert any objects into any opening on the unit.
- Do not autoclave any portion of the unit.
- Do not attempt to modify or repair any component of the unit.

## Product Description

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Like other Syris Scientific products, the in·vu Vantage is a vision enhancement system. As a result of comprehensive product testing and evaluation, this product incorporates the following features to help you see better.

- Illumination with a ring of cool white light emitting diodes (LEDs).
- 4 diopter (2X) magnification with a 5-inch diameter lens.
- Adjustable light polarization from completely cross-polarized to completely parallel-polarized.
- Adjustable positioning with a self-supporting extension arm.
- Anti-reflective lens coating to reduce glare from room lighting.
- The in·vu Vantage can be purchased with the option of either a roll stand or a table-mount.



## Product Setup

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The in·vu Vantage is sold with the option of a roll stand or a table mount. Please follow the appropriate procedure to assemble your in·vu Vantage.

### Table Mount Setup (Figure 2)

#### Step 1

Carefully remove all components from their packaging.

#### Step 2

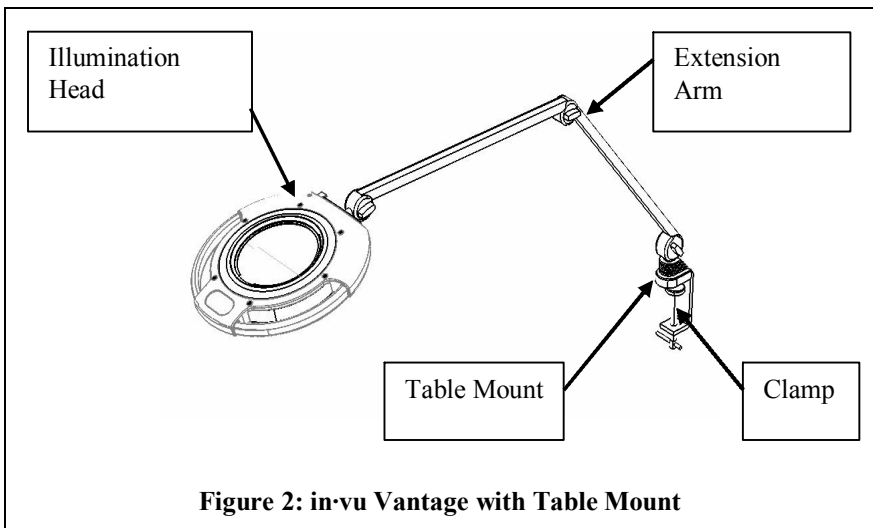
Loosen the Clamp of the Table Mount. Slide the Table Mount onto a rigid, stable surface such as a table top or desk top. Tighten the Clamp until the Table Mount is firmly attached to the surface.

#### Step 3

Place end of the Extension Arm into the top of Table Mount as shown.

#### Step 4

Plug the cord from the Extension Arm into the Power Supply (not shown in Figure 2). Plug the Power Supply into an approved outlet.



## **Roll Stand Setup (Figure 3)**

### **Tools Required:**

1/2 inch wrench (not supplied) and 1/8 inch Allen wrench (supplied)

### **Step 1**

Carefully remove all components from their packaging.

### **Step 2**

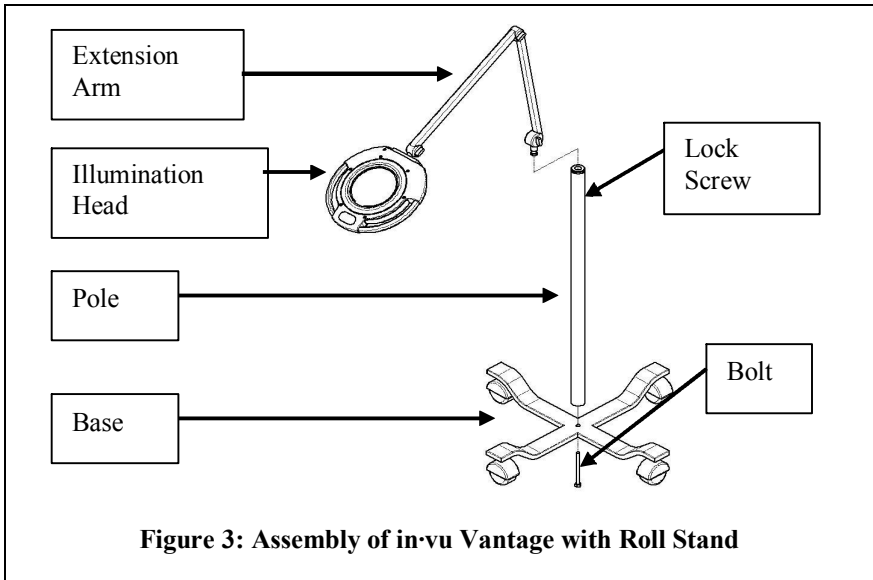
Place the Base on the floor and tip it on its side. Insert the bolt through the hole in the Base and screw it into the threaded end of the Pole. Tighten the bolt with a 1/2 inch wrench.

### **Step 3**

Tip the assembled Roll Stand upright. Place end of the Extension Arm into the top of the Pole as shown. Tighten the Lock Screw with the 1/8 inch Allen wrench to ensure that the Extension Arm is secure in the Pole.

### **Step 4**

Plug the cord from the Extension Arm into the Power Supply (not shown in Figure 3). Plug the Power Supply into an approved outlet.



## Product Operation

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To experience the best performance from your in·vu Vantage, follow the 3 simple operating guidelines.

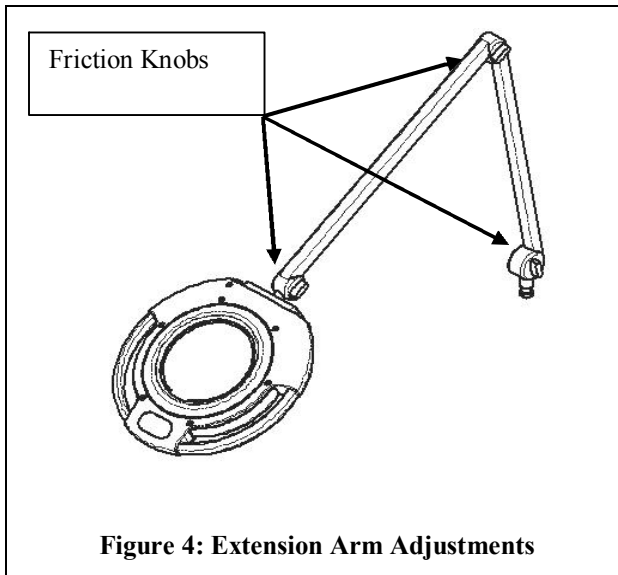
### 1) Adjusting the Extension Arm

**The Extension Arm is spring-loaded to support the weight of the Illumination Head. Three Friction Knobs are located on the Extension Arm to stiffen the arm when necessary (see**

Figure 4). If the Illumination Head does not remain in the position that you put it, tighten one or all of the Friction Knobs.

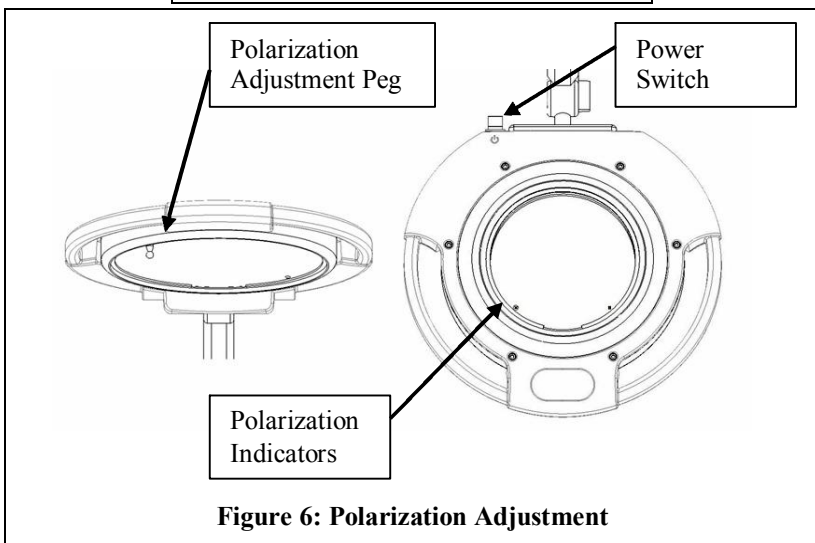
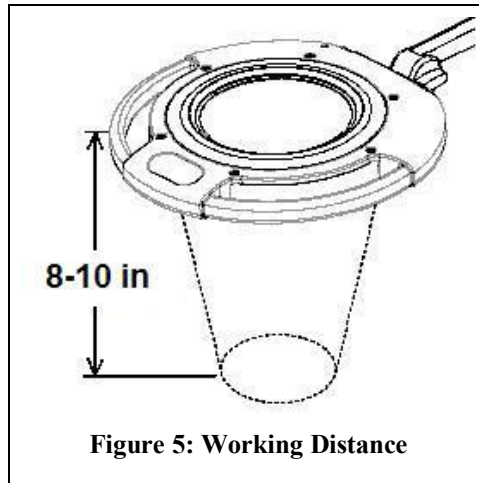
### 2) Positioning the Illumination Head

The in·vu Vantage is designed to provide even illumination of a subject that is 8-10 inches below the Illumination Head. Figure 5 displays the illumination pattern of the in·vu Vantage and its proper working distance.



### 3) Cross – Parallel Polarized Viewing

The in-vu Vantage offers illumination in either cross-polarized or parallel-polarized modes. To view a subject in either of these modes, first turn on the power switch (Figure 6). Adjust the polarization by sliding the Polarization Adjustment Peg labeled in Figure 6. The mode of polarization is indicated by two marks on the lower edge of the lens. X = cross polarized, || = parallel-polarized.



## Photography Guidelines


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The in·vu Vantage has been designed so that you may take pictures of a subject directly through the magnification lens of the Illumination Head. Syris Scientific recommends that you review the following guidelines and practice taking pictures with the in·vu Vantage. After an appropriate amount of time, Syris is confident that you will have developed a photography process that suits your specific needs.

**1) Use a high quality camera.**

Many digital and conventional cameras on the market are capable of taking high quality pictures and are moderately priced. It is recommended that you use a high quality camera in which you can adjust the settings listed in guideline (2).

**2) Adjust the camera settings.**

- a. Put camera on the shutter-priority automatic setting, **S**. Set the shutter speed to 1/30 second.
- b. Set the focal distance to 2 ft (0.61 m).
- c. Turn off the flash, .

**3) Place the camera on a tri-pod.**

It is recommended that you always mount the camera to a tripod to achieve clear, sharp pictures.

**4) Turn off the room lights and close the shades.**

Room lighting is not cross-polarized and will interfere with photography. For optimal results, always turn off the room lights and close window shades when taking pictures with the in·vu Vantage.

**5) Position Illumination Head 10-12 inches away from the subject.**

This distance will ensure uniform lighting and proper focus.

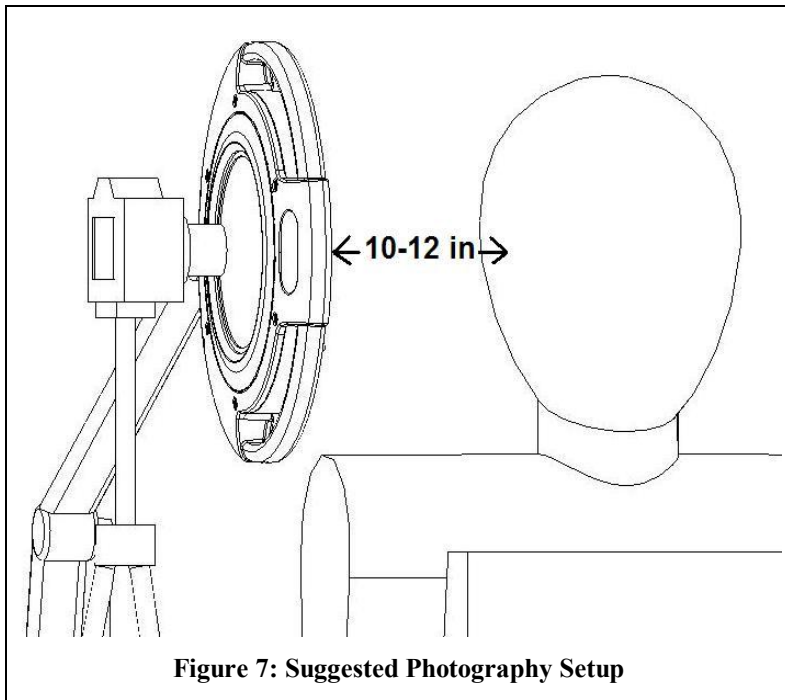
**6) Position the camera approximately 1 inch from the magnification lens.**

**7) Use the camera viewfinder to frame the picture.**

Zooming in on the subject may cause lower quality pictures, so it is recommended that a high resolution image be taken and then enlarged using photo editing software if necessary.

**8) Shoot the picture.**

To eliminate blur from camera movement, use the time-shutter release or remote shutter release to shoot the picture.



## Handling and Cleaning

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To keep your in·vu Vantage in optimum operating condition, please follow the handling and cleaning guidelines below.

### Handling

- Positioning of the Illumination Head should be done by grasping the handles on either side of the Illumination Head, or by grasping the Extension Arm.
- It is recommended that Barrier Film be applied to both handles of the Illumination Head. Barrier Film will protect the handles from contamination and allow for easier and faster cleaning. See the *in·vu Vantage Accessories List* included with this manual.
- Avoid touching the magnification lens and splatter shield with any hard or abrasive object.
- To avoid injury, movement of the unit should be done by grasping the Pole of the Rolling Base and rolling the product on the floor.

### Cleaning

- Clean the unit after every use that may have contaminated the product.
- Clean the entire unit with disinfectant swabs containing alcohol.
- After cleaning, it is recommended that the magnification lens and splatter shield be wiped with optical cloth or equivalent non-abrasive, non-linting cleaning cloth. Wipe the lens gently with a circular motion.
- Never clean any components of the Illumination Head with hard objects or abrasives.
- Never autoclave any part of the unit.

## Storage

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Follow the guidelines below to properly store and service your in·vu Vantage.

### Storage

- Turn the power off when the in·vu Vantage is not in use.
- For temporary storage of the in·vu Vantage, fold the Extension Arm so that the Illumination Head is close to the Pole or Table Mount.
- For long term storage, unplug the in·vu Vantage and place it in an area where it is not prone to damage.
- The acceptable storage temperature range is 32 – 122 °F (0 – 50 °C).
- The acceptable storage humidity range is 0-80% relative humidity.

## Service and Repair

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Please read and understand the following service and repair notes for the in·vu Vantage.

- There are no user serviceable parts in the in·vu Vantage. There are also no parts that will require service during the normal life of the product. If for some reason, the product becomes damaged, call our service group at 800.714.1374 or 207.657.7050 to discuss your repair options.
- The in·vu vantage was designed to provide illumination with a ring of 90 high output, white LEDs. Due to the performance characteristics of these lights, the in·vu Vantage design allows up to 6 LEDs to fail without impacting product performance. In the event that an excess of 6 LEDs fail, the in·vu Vantage is designed to allow for replacement of the LED illuminator ring.

## **General Product Specifications**

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### **Illumination and Optics**

Light Output: 90 candlepower bright white LED light, cross or parallel-polarized.

Magnification: 2x (4 diopter)

### **Shipping Dimensions and Weight**

Extension Arm, Illumination Head, and Power Supply:

34 in x 15 in x 5 in (0.86 m x 0.38 m x 0.13 m)

9 lb (4.1 Kg)

Roll Stand:

37 in x 24 in x 7 in (0.94 m x 0.61 m x 0.18 m)

27 lb (12.3 Kg)

### **Storage Dimensions**

Roll Stand Version: 24 in x 24 in x 54 in (0.61 m x 0.61 m x 1.37 m)

Table Mount Version: 12 in x 12 in x 30 in (0.30 m x 0.30 m x .75 m)

### **Power Supply**

Input: 90-264 VAC, 47-63 Hz

Output: 13.8 VDC, 3 A maximum.

## Warranty Information

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**IMPORTANT!** The warranty for the in·vu Vantage is only valid if you fill out the Warranty Registration Card and send it to Syris Scientific. See page 17.

Syris Scientific, LLC warrants this product to be free from defects in material and workmanship, according to the following terms and conditions:

- 1) The warranty for the Product extends for one (1) year. The warranty period begins the date of purchase of the Product.
- 2) The warranty for the product extends only to the original consumer purchaser (“Consumer”) of the product and is not transferable or assignable to any subsequent purchaser or end user.
- 3) During the warranty period, Syris Scientific will repair or replace, at the Company’s option, any defective parts, or any parts which will not properly operate for their intended use, with exception to the LED illuminator ring, which will not be replaced unless more than 6 LEDs fail to illuminate. No charge will be made to the Consumer for any such parts. The Company will also pay the labor charges incurred by Syris Scientific in repairing or replacing the defective parts. The external housing and cosmetic parts shall be free of defects at the time of shipment and, therefore, shall not be covered under these warranty terms.
- 4) Upon request from Syris Scientific, the Consumer must provide information to reasonably prove the date of purchase.
- 5) The Consumer shall bear the cost of shipping and any duties to Syris Scientific in Gray, Maine, USA. Syris Scientific shall bear the cost of shipping (but not duties) the product back to the Consumer after completion of any service which falls under the warranty.

- 6) The Consumer shall not have coverage of benefits under this warranty if any of the following conditions are applicable:
  - a. The Product has been subject to: abnormal use, abnormal conditions, improper storage, exposure to moisture or dampness, unauthorized modifications, unauthorized connections, unauthorized repair, misuse, neglect, abuse, accident, alteration, improper installation, or other acts which are not the fault of Syris Scientific, including damage caused by shipping and blown fuses.
  - b. Syris Scientific was not notified by the Consumer of the alleged defect or malfunction of the product during the applicable warranty period.
  - c. The product serial number or date codes have been removed, defaced, or altered.
- 7) If a problem develops during the warranty period, the Consumer should follow this procedure:
  - a. Call Syris Scientific at 800.714.1374 or 207.657.7050 to obtain a Returned Material Authorization Number (RMA).
  - b. Write a brief description of the problem, and include the Consumer daytime phone number, return address for shipping, proof of purchase, and the RMA number.
  - c. Ship the product prepaid and insured to:

Syris Scientific  
22 Shaker Rd., P.O. Box 127  
Gray, ME 04039 U.S.A  
Attn: Service Dept.

- 8) The Consumer will be charged for any parts or labor charges not covered by this warranty.
- 9) If the product is returned during the warranty period, but the problem with the Product can not be fixed under the terms and conditions of this warranty, the Consumer will be notified and given an estimate of the charges the Consumer must pay to have the Product repaired. All shipping charges will be billed to the Consumer. If the estimate is refused, the Product will be returned freight collect. If the Product is returned to Syris Scientific after the expiration of the warranty period, Syris Scientific normal service policies shall apply and the Consumer will be invoiced for all shipping charges.
- 10) Any implied warranty of the merchantability or fitness for a particular purpose or use, shall be limited to the duration of the foregoing written warranty. Otherwise, the foregoing warranty is the Purchaser's sole and exclusive remedy, and in lieu of all other warranties, expressed or implied, Syris Scientific shall not be liable of incidental or consequential damages or a loss of anticipated benefits or profits resulting from the purchase or use of the Product, or arising from the breach of the warranty even if Syris Scientific knew of the likelihood of such damages.
- 11) Some states do not allow the limitation of how long an individual warranty lasts, so the above limitations may not apply to the Consumer. Some states do not allow the exclusion, or limitations or exclusions may not apply to the Consumer. This warranty gives the Consumer specific legal rights and the Consumer may also have other rights which vary from state to state.
- 12) Syris Scientific neither assumes nor authorizes any service center or any person or entity to assume for it any other obligation or liability beyond that which is expressly provided for in this warranty. The Consumer will be charged for any parts or labor charges not covered by this warranty.
- 13) Warranties for Syris Scientific supplied accessories and attachments are specifically defined within their own warranty cards and packaging.

## Warranty Card

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A Warranty Registration Card is included with this manual. Please complete and send this card to Syris Scientific to the address below.

**Failure to return the Warranty Registration Card to Syris Scientific voids the warranty on the in·vu Vantage.** If you have lost your Warranty Registration Card, remove the Warranty Registration Card from the bottom half of this page.

Syris Scientific  
22 Shaker Rd.  
Gray, ME 04039 USA

(cut on this line)

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Syris Scientific in·vu Vantage  
Warranty Registration Card

Registration is necessary to activate the warranty. Fill in this card and return it by mail to Syris Scientific. Please write clearly.

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Phone Area Code (        ) \_\_\_\_\_

Fax Area Code (        ) \_\_\_\_\_

Email \_\_\_\_\_

Date you received your in·vu Vantage \_\_\_\_\_

Serial Number \_\_\_\_\_

What is your profession specialty?

What is the primary intended use for your system?